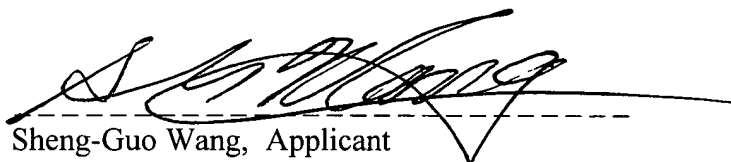


----- Applicant Pro Se -----

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Dec. 22, 2006



Sheng-Guo Wang, Applicant

12-14

Interview

4 pages

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Record of the Substance of the Telephone Interview

Participants: Examiners: Dionne Mayes and Curtis Mayes

Applicant: Sheng-Guo Wang

Date: 12-14-2006



I. Applicant expresses his thanks to

- the Honorable Under Secretary of Commerce Jon Dudas and the Honorable Commissioner for Patents John Doll for their helpful advice; and
- the Examiner Ms. Dionne Mayes and the Examiner Mr. Curtis Mayes for their time, the telephone interview and helpful discussion and suggestion, especially on Claim 26.

II. Claims discussed: detail on claim 26 and very brief on claims 21-22, 24.

III. Identification of prior art discussed:

Yoshimura (JP) US 5073179, Kohei (JP) JP 06-206734.

IV. Identification of the principal proposed amendments of a substantive nature discussed:

The following amendments are proposed by the Examiners Mr. Curtis Mayes and Ms. Dionne Mayes. The applicant thanks the Examiners for their constructive and helpful suggestion, and agrees with the Examiners' proposed amendments to Claim 26.

Claim 26 will be amended as suggested, listed and marked as follows:

26. (currently amended) A drawing process for producing an optical fiber comprising the steps of:

heating a preform at a preform feeding speed into a furnace;

heating and melting the a preform in the a furnace;

while heating and melting, drawing said optical fiber from said preform at a fiber drawing speed;

measuring the outer diameters of said optical fiber, ~~when that~~ which is bare, at two or more different measurement locations by respective measurement devices before coating,

wherein a first location is close to the furnace to provide a first measured bare fiber diameter, and

a second location is below the first location, at this second location shrinkage of the outer diameter of said optical fiber, while stretched under the drawing, is not larger than a predetermined allowable bare fiber diameter deviation value of said optical fiber, or the second location is immediately before coating to provide a second measured bare fiber diameter;

coating said optical fiber;

providing a control system with the measurement data from said measurement devices respectively at the different locations;

calculating a first bare fiber diameter deviation of the first measured bare fiber diameter from a first preselected bare fiber diameter value;

calculating a second bare fiber diameter deviation of the second measured bare fiber diameter from a second preselected bare fiber diameter value which is less than the first preselected bare fiber diameter value;

generating control signals based on the combination of the first bare fiber diameter deviation and the second bare fiber diameter deviation for said optical fiber drawing process control;
and

adjusting the feeding speed of said preform and the drawing speed of said fiber according to said control signals.

~~wherein said control system~~

~~has a first preselected value for the measurement data from the first measurement location, and a second different preselected value that is less than the first preselected value for the measurement data from the second measurement location;~~

~~calculates the deviation of the measurement of the first measurement location from the first preselected value, and the deviation of the measurement of the second measurement location from the second preselected value, and~~

~~controls a fiber drawing speed and a preform feeding speed for the drawing process based on the calculated deviations;~~

~~whereby to robustly control said optical fiber drawing process by the double measurements of the bare fiber diameters from said measurement devices.~~

V. Brief identification of the general thrust of the principal arguments presented to the Examiner:

The followings are presented and briefly discussed.

1. Applicant says that last time the Examiner expressed that Applicant had presented convincing reasons. Applicant hopes the Examiners to consider that.
2. On April 27, the SPE Steven Griffin also said “current anything is OK and the today's proposed claims amendments are reasonable for patent”. When applicant asked if he needed to file an RCE, the SPE clearly told applicant that no RCE was needed and the notice would be issued before that day. Applicant really appreciates that. But the things continue differently.
3. Examiner Sean Vincent in his O.A. mentioned Allowable Subject Matter –“feeding speed and drawing speed are adjusted according to control signals generated from calculated deviations of preform diameter, first fiber diameter and second fiber diameter measurements from preselected diameter values as claimed.

Applicant expresses that Claims 21 and 26 touch that. It is exactly that issue.

4. Claim 26 mentioned double measurements of the bare fiber. Also, the word “double” is summarized by Examiner Peter Chin and recognized for patentably differing from the references by him.
5. Applicant respectfully requests Examiners’ constructive suggestions and help.
6. As to Claim 21, Examiners express they would like to give applicant a prior art Japanese reference which caused question. Examiner Ms. Mayes says that after applicant has a chance to look it, then we can amend claim 21 to define over this new reference. For Claim 26, the Examiners give suggestions for modification.
7. Applicant thanks Examiner Ms. Mayes for her work method and attitude.
8. Examiner Mr. Mayes expresses that the application has two fiber diameter measurement devices for double measurements on the bare fiber, making difference from Yoshimura 5073179 who has only one or by switching and Kohei who also is not using both at same time. He further suggests using some language from Claim 37 as a template into Claim 26 and some other amendments as marked above.

9. Applicant agrees with the suggested amendments from the Examiner, an expert. Applicant also expresses that the prior art does only one measurement on the bare fiber at any time, the applicant is the first to have the double measurements on the bare fiber.
10. Examiner Mr. Mayes briefly describes the new reference figure. The new reference is JP52120841.
11. Regarding Claims 21-22 and 24-25, Applicant clearly states that, he believes, the references, the prior art will not have applicant's control principles. He expresses that his control principles for the process control are novel and patentable, such as in Claims 22 and 24. The prior art will not have these control operation principles.

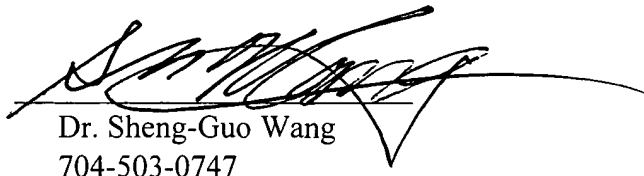
VI. General indication of any other pertinent matters discussed:

- The next discussion is on the coming Tuesday.
- The Examiners will fax the new reference or give the access to that.

VII. General results or outcome of the interview:

1. The Examiners and Applicant make agreement on the amendment to Claim 26 for patent. The Examiners present the amendment to Claim 26 as an allowable claim, and Applicant fully agrees with that.
2. Applicant will read the new reference after the interview and to discuss and work together with the Examiners for Claims 21-22 and 24-25 at the next tele-interview on December 19.
3. The Examiners and Applicant will work together further on the remaining claims 21-22 and 24-25.

Respectfully submitted by the applicant


Dr. Sheng-Guo Wang
704-503-0747

12-19
interview
4 pages

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Record of the Substance of the Telephone Interview

Participants: Examiners: Dionne Mayes and Curtis Mayes

Applicant: Sheng-Guo Wang

Date: 12-19-2006



I. Applicant expresses his thanks to

- the Honorable Under Secretary of Commerce Jon Dudas and the Honorable Commissioner for Patents John Doll for their helpful advice; and
- the Examiner Ms. Dionne Mayes and the Examiner Mr. Curtis Mayes for their time, the telephone interview and helpful discussion and suggestions.

II. Claims discussed: 21 – 22, 24 – 25.

III. Identification of prior art discussed:

Harding (GB) US 4793840, Suganuma (JP) JP 52120841.

IV. Identification of the principal proposed amendments of a substantive nature discussed:

The following amendments are proposed by Applicant or suggested by the Examiner Mr. Curtis Mayes during the interview, and discussed among the Examiners and Applicant.

1. Claim 21 will be amended as listed and marked as follows:

“

generating control signals based on the combination of the preform deviation, the fiber diameter deviation, the measured preform diameter or shape, and the predetermined preform value for said optical fiber drawing process control; and

adjusting the feeding speed of said preform and the drawing speed of said fiber according to said control signals;

~~wherein the control system generates control signals based on the preform deviation and the fiber diameter deviation for controlling~~

~~the feeding speed of said preform and the drawing speed of said optical fiber;~~

whereby said optical fiber drawing process is robustly controlled against deviations of the preform outer diameter or shape at different locations and against deviations of various preforms.”

To add the words “the combination of” is suggested by the Examiner Mr. Mayes.

2. Dependent Claim 22 is cancelled.
3. Dependant Claim 24 is amended correspondingly in view of the amended Claim 21 as:
24. (currently amended) The process as claimed in claim 21, wherein
the control signals are further based on ~~the preform measurement,~~ the fiber measurement, ~~the predetermined preform value and the predetermined fiber value,~~
~~for said optical fiber drawing process control to control the feeding speed of said preform and the drawing speed of said optical fiber.~~

V. Brief identification of the general thrust of the principal arguments presented to the Examiner:

Applicant briefly describes some claimed key features of the present invention in the amended Claim 21, which patentably differ from the prior art, as follows:

1. *“generating control signals based on the combination of the preform deviation, the fiber diameter deviation, the measured preform diameter or shape, and the predetermined preform value for said optical fiber drawing process control;”*
2. *“adjusting the feeding speed of said preform and the drawing speed of said fiber according to said control signals;”*
3. *“whereby said optical fiber drawing process is robustly controlled against deviations of the preform outer diameter or shape at different locations and against deviations of various performs.”*

The followings are presented and briefly discussed.

1. JP 52120841 (Suganuma) teaches and needs his preform feeding at “a fixed speed” “ V_p ”. The reference *four times emphasizes that the preform is fed “at a fixed speed”* (p.2, left-top-column line 8, right-bottom-column lines 11, 14-15; p.3, left-top column lines 8-9), in addition to its example fixed speed “ $v_p = 0.80 \text{ cm/min}$ ” as listed in Eq. (6) in page 3, p.3 left-bottom-column line 2, p.3 right-bottom-column line 12, and p.4 left-top-column line 11 in the document.

JP 52120841 preform feeding speed must be fixed as he teaches clearly. Otherwise, his equations (4) and (5) would not hold, and it would destroy his invention as a whole.

2. On the other hand, Harding's "the preform feed rate (20) is modified (algorithm 21) to maintain an average fibre pulling rate within $\pm 5\%$ of the present pulling rate, to thus control the glass melting rate" (Harding's Abstract and claims).
3. Therefore, the proposed combination of Haring and JP 52120841 will not only be inoperable, but also change the control operation principle of the primary reference, and change the control operation principles of both references. Thus, this combination is impermissible as pointed out in MPEP 2143.03, 2141, 706.02(j) and the court decisions.
4. Even as modified or combined of Harding and Suganuma (JP 52120841), the resultant teachings still omit one or more of applicant's claimed features as cited above. However, MPEP 2141 and 706.02 and the court decisions clearly state that the prior art references must teach or suggest all claimed limitations.
5. Also, please see the court decisions and MPEP 2143.03 – All Claim Limitations Must Be Taught or Suggested by the prior art. The objective evidence is that the references have no any teaching or suggestion to one or more of above listed claimed key feature limitations.
6. Applicant very respects all these prior art inventors and honor their work. Applicant also respectfully requests the PTO to honor his claimed invention which is patentable.
7. Applicant points out that the new reference lacks: (i) the preform feeding speed adjusting (V_p is fixed, pp.2-4 and figures 1, 3 and 5); (ii) the robust control; and (iii) the applicant's claimed control principles. The previous Claim 21 already patentably differs from the new reference. To show his cooperation to work together, Applicant proposes the further amendment to Claim 21 as listed above.
8. Applicant points out that, as Suganuma (JP 52120841) states [p.2, right-top-column lines 1-7], Equation (2) is valid only if all these differentials (deviations) approach zero, i.e., very little, which is the basis of Suganuma's analysis.
Suganuma further clearly states: "However, if the little deviations are very little, then equation (2) is a valid equation relationship; if the deviation increases, the fiber drawing status largely leaves from a stable status and goes to crash, this fact is very clear that these equation relationships are not valid." (p.2 right-top-column lines 4-7)

9. Examiner Mr. Mayes expresses that he will check JP 52120841 in Japanese.
10. The Examiners and Applicant discuss the application as a whole and especially equation (3).
11. Applicant points out that the present invention presents the novel and patentable control principles, one of which is based on the calculated preform deviation, the calculated fiber diameter deviation, the measured preform diameter or shape and the predetermined preform value, over the prior art. This control principle is valid for either large or small deviations with the goal to let the fiber deviation being zero. That is totally different from the prior art. That is also recognized by previous Examiners. That is the allowable subject matter as recognized and agreed after the discussion.
12. Examiner Mr. Curtis Mayes expresses his OK for that. He further suggests adding the words "the combination of" after the words "generating control signals based on". Applicant also agrees with that suggestion.

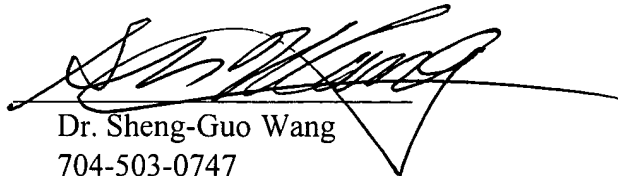
VI. General indication of any other pertinent matters discussed:

- Examiner Ms. Dionne Mayes asks Applicant to submit a Supplemental Amendment to the Claims as discussed and agreed. Applicant agrees with that.
- Applicant asks what the following next step is.

VII. General results or outcome of the interview:

1. The Examiners and Applicant agree on the allowable subject matter as discussed.
2. Applicant will submit the Supplemental Amendment to the Claims with the Reply Remarks and request for a notice of allowance.
3. Examiner Dionne Mayes expresses that if she has any question, she will call Applicant. If no question, a Notice of Allowance will be issued.

Respectfully submitted by the applicant


Dr. Sheng-Guo Wang
704-503-0747